IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): An image input apparatus comprising:

a projector unit ~~for projecting~~ configured to project image pick-up light onto an image object;

an image pick-up unit ~~for picking~~ configured to pick up an image of the image object;

a support unit ~~for supporting~~ configured to support the image pick-up unit; and

a mover unit ~~for moving~~ configured to move the image pick-up unit relatively with the support unit,

wherein the projector unit projects a ~~predetermined~~ projection light pattern onto the image object,

the image pick-up unit picks up a projection image containing a visual angle distortion of the ~~predetermined~~ projection light pattern,

the relative position between the projector unit and the image pick-up unit is fixed, and

the mover unit causes relative movement of the image pick-up unit so as to pick up a plurality of projection images at different image pick-up locations.

Claim 2 (Original): The image input apparatus as claimed in claim 1, wherein

the relative position between the projector unit and the support unit is fixed, and

the mover unit moves the image pick-up unit so that the image pick-up unit picks up the plurality of projection images at different image pick-up locations.

Claim 3 (Original): The image input apparatus as claimed in claim 1, wherein the image pick-up unit picks up a non-projection image formed when the projector unit does not project light onto the image object.

Claim 4 (Currently Amended): The image input apparatus as claimed in claim 1, further comprising a location memory unit ~~for storing~~ configured to store location data of the image pick-up unit when an image is picked up by the image pick-up unit,

wherein a visual angle distortion of the image picked up by the image pick-up unit is corrected in accordance with the location data stored in the location memory unit.

Claim 5 (Currently Amended): The image input apparatus as claimed in claim 1, further comprising a switch unit ~~for switching~~ configured to switch an image pick-up mode between a first operation mode for picking up a flat image and a second operation mode for picking up a three-dimensional image.

Claim 6 (Original): The image input apparatus as claimed in claim 1, wherein the image pick-up unit performs a preliminary image pick-up operation on an image pick-up area.

Claim 7 (Original): The image input apparatus as claimed in claim 1, wherein the projector unit projects a projection light pattern for indicating an image pick-up area before the image pick-up unit performs an image pick-up operation on the image object.

Claim 8 (Currently Amended): The image input apparatus as claimed in claim 5, wherein,

in the first operation mode, the image pick-up unit performs an image pick-up operation without light projection from the projector unit, and

in the second operation mode, the projector unit projects the ~~predetermined~~ projection light pattern onto the image object, so that the image pick-up unit picks up the projection image containing a visual angle distortion of the projection light pattern.

Claim 9 (Original): The image input apparatus as claimed in claim 5, wherein, in the second operation mode, before or after the image pick-up unit picks up the projection image, the image pick-up unit picks up a non-projection image formed when the projector unit does not project light onto the image object.

Claim 10 (Currently Amended): The image input apparatus as claimed in claim 1, further comprising a three-dimensional configuration measurement unit ~~for measuring~~ configured to measure a three-dimensional configuration of an image object in accordance with an image picked up by the image pick-up unit.

Claim 11 (Currently Amended): The image input apparatus as claimed in claim 10, further comprising a three-dimensional image forming unit ~~for forming~~ configured to form a three-dimensional image in accordance with the image picked up by the image pick-up unit and the three-dimensional configuration of the image object obtained by the three-dimensional configuration measuring unit.

Claim 12 (Currently Amended): The image input apparatus as claimed in claim 1, further comprising a visual angle distortion correcting unit ~~for correcting~~ configured to correct a visual angle distortion of each picked up image.

Claim 13 (Original): The image input apparatus as claimed in claim 1, wherein the support unit is rotatable.

Claim 14 (Currently Amended): An image input apparatus as claimed in claim 1, further comprising:

~~an image pick-up unit;~~

~~a support unit for supporting the image pick-up unit; and~~

a three-dimensional configuration measuring unit ~~for measuring~~ configured to measure a three-dimensional image object,

which apparatus has three image pick-up modes consisting of:

a paper image pick-up mode for picking up an image of a flat object such as paper;

a book image pick-up mode for picking up an image of a double-page spread object such as an opened book; and

a three-dimensional image pick-up mode for picking up an image of a three-dimensional object.

Claim 15 (Original): The image input apparatus as claimed in claim 14, wherein the image pick-up unit has a plurality of image pick-up resolution settings corresponding to the image pick-up modes.

Claim 16 (Currently Amended): The image input apparatus as claimed in claim 14, further comprising:

an image object determining unit ~~for determining~~ configured to determine characteristic features of the image object in accordance with a measurement result obtained by the three-dimensional configuration measuring unit; and

an automatic mode select unit ~~for automatically selecting~~ configured to automatically select one of the three image pick-up modes in accordance with a determined result from the image object determining unit.

Claim 17 (Currently Amended): An image input apparatus comprising:

a projector unit ~~for projecting~~ configured to project image pick-up light onto an image object;

an image pick-up unit ~~for picking~~ configured to pick up an image of the image object;

a support unit ~~for supporting~~ configured to support the image pick-up unit; and

a mover unit ~~for moving~~ configured to move the image pick-up unit relatively with the support unit,

wherein the projector unit projects a ~~predetermined~~ projection light pattern onto the image object,

the image pick-up unit picks up a projection image containing a visual angle distortion of the ~~predetermined~~ projection light pattern, and

the mover unit moves the image pick-up unit by a very small distance, so that the image pick-up unit picks up a plurality of projection images in image pick-up positions that are only slightly shifted from one another.

Claim 18 (Currently Amended): The image input apparatus as claimed in claim 17, further comprising a composition unit ~~for combining~~ configured to combine three-dimensional configuration data obtained in accordance with the plurality of projection images so as to generate combined three-dimensional configuration data.

Claim 19 (New): An image input method comprising:

projecting image pickup light onto an image object using a projector unit;

picking up an image of the image object using an image pick-up unit;

supporting the image pick-up unit using a support unit; and

moving the image pick-up unit relatively with the support unit using a mover unit,

wherein the projector unit projects a projection light pattern onto the image object, the image pick-up unit picks up a projection image containing a visual angle distortion of the projection light pattern, the relative position between the projector unit and the image pick-up unit is fixed, and the mover unit causes relative movement of the image pick-up unit so as to pick up a plurality of projection images at different image pick-up locations.

Claim 20 (New): The image input method as claimed in claim 19, wherein the relative position between the projector unit and the support unit is fixed, and the mover unit moves the image pick-up unit so that the image pick-up unit picks up the plurality of projection images at different image pick-up locations.

Claim 21 (New): The image input method as claimed in claim 19, wherein the image pick-up unit picks up a non-projection image formed when the projector unit does not project light onto the image object.

Claim 22 (New): The image input method as claimed in claim 19, further comprising storing location data of the image pick-up unit in a location memory unit when an image is picked up by the image pick-up unit, wherein a visual angle distortion of the image picked up by the image pick-up unit is corrected in accordance with the location data stored in the location memory unit.

Claim 23 (New): The image input method as claimed in claim 19, further comprising switching an image pick-up mode between a first operation mode for picking up a flat image and a second operation mode for picking up a three-dimensional image, using a switch unit.

Claim 24 (New): The image, input method as claimed in claim 19, wherein the image pick-up unit performs a preliminary image pick-up operation on an image pickup area.

Claim 25 (New): The image input method as claimed in claim 19, wherein the projector unit projects a projection light pattern for indicating an image pick-up area before the image pick-up unit performs an image pick-up operation on the image object.

Claim 26 (New): The image input method as claimed in claim 23, wherein, in the first operation mode, the image pickup unit performs an image pickup operation without light projection from the projector unit, and in the second operation mode, the projector unit projects the predetermine projection light pattern onto the image object, so at the mage pick-up unit picks up the projection image containing a visual angle distortion of the projection light pattern.

Claim 27 (New): The image input method as claimed in claim 23, wherein, in the second operation mode, before or after the image pick-up unit picks up the projection image, the image pick-up unit picks up a non-projection image formed when the projector unit does not project light onto the image object.

Claim 28 (New): The image input method as claimed in claim 19, further comprising measuring a three-dimensional configuration of an image object in accordance with an image

picked up by the image pickup unit, using a three-dimensional configuration measurement unit.

Claim 29 (New): The image input method as claimed in claim 28, further comprising forming a three-dimensional image in accordance with the image picked up by the image pick-up unit and the three-dimensional configuration of the image object obtained by the three-dimensional configuration measuring unit, using a three-dimensional image forming unit.

Claim 30 (New): The image input method as claimed in claim 19, further comprising correcting a visual angle distortion of each picked up image, using a visual angle distortion correcting unit.

Claim 31 (New): The image input method as claimed in claim 19, wherein the support unit is rotatable.

Claim 32 (New): An image input method as claimed in claim 19, further comprising:

measuring a three-dimensional image object using a three-dimensional configuration measuring unit,

which method operates in three image pick-up modes consisting of:

a paper image pick-up mode for picking up an image of a flat object such as paper;

a book image pick-up mode for picking up an image of a double-page spread object such as an opened book; and

a three-dimensional image pick-up mode for picking up an image of a three-dimensional object.

Claim 33 (New): The image input method as claimed in claim 32, wherein the image pick-up unit has a plurality of image pick-up resolution settings corresponding to the image pick-up modes.

Claim 34 (New): The image input method as claimed in claim 32, further comprising:

determining characteristic features of the image object in accordance with a measurement result obtained by the three-dimensional configuration measuring unit, using an image object determining unit; and

automatically selecting one of the three image pickup modes in accordance with a determined result from the image object determining unit, using an automatic mode select unit.

Claim 35 (New): An image input method comprising:

projecting image pickup light onto an image object using a projector unit;

picking up an image of the image object using an image pick-up unit;

supporting the image pick-up unit using a support unit; and

moving the image pick-up unit relatively with the support unit using a mover unit, wherein the projector unit projects a projection light pattern onto the image object, the image pick-up unit picks up a projection image containing a visual angle distortion of the projection light pattern, and the mover unit moves the image pick-up unit by a very small distance, so that the image pick-up unit picks up a plurality of projection images in image pick-up positions that are only slightly shifted from one another.

Claim 36 (New): The image input method as claimed in claim 35, further comprising combining three-dimensional configuration data obtained in accordance with the plurality of

projection images so as to generate combined three-dimensional configuration data, using a composition unit.

Claim 37 (New): An image input apparatus comprising:

means for projecting image pickup light onto an image object;

means for picking up an image of the image object;

means for supporting the means for picking up an image ; and

means for moving the means for picking up an image relatively with the means for supporting,

wherein the means for projecting projects a projection light pattern onto the image object, the means for picking up an image picks up a projection image containing a visual angle distortion of the projection light pattern, the relative position between the means for projecting and the means for picking up an image is fixed, and the means for moving causes relative movement of the means for picking up an image so as to pick up a plurality of projection images at different image pick-up locations.